

## **REMARKS**

This is a full and timely response to the non-final Office Action mailed July 5, 2005. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### **Present Status of Patent Application**

Upon entry of the amendments in this response, claims 1-31 remain pending in the present application. More specifically, claims 1-27 are unamended original claims, while claims 28 – 31 have been newly submitted with no new material being added. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

#### **A. Double Patenting Rejection**

##### **Statement of the Rejection**

Claims 1-27 are provisionally rejected under the judicially-created doctrine of double patenting over claims 1-28 of copending Application number 09/915,656. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

##### **Response to the Rejection**

In response to the double patenting rejection, Applicants submit herewith a Terminal Disclaimer pursuant to 37 C.F.R. §1.321(c). Applicants have submitted the Terminal Disclaimer solely to advance prosecution of the application, without conceding that the double patenting rejection is properly based. In filing the Terminal Disclaimer, Applicants rely upon the rulings of the Federal Circuit that the filing of such a Terminal Disclaimer does not act as an admission, acquiescence or estoppel on the merits of the obviousness issue. See, e.g., *Quad Environmental Tech v. Union Sanitary Dist.*, 946 F.2d 870, 874-875 (Fed. Cir. 1991); and *Ortho Pharmaceutical Corp. v. Smith*, 959 F.2d 936, 941-942 (Fed. Cir. 1992).

#### **B. Claim Rejections under 35 U.S.C. §102(b)**

##### **Statement of the Rejection**

Claims 1-27 have been rejected under 35 U.S.C. §102(b) as being anticipated by O'Neill [4,359,733].

## **Response to the Rejection**

A proper rejection under 35 U.S.C. §102(b) requires that a single prior art reference disclose each element of the claim. Furthermore, anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Applicants respectfully submit that the Office Action does not satisfy the requirements for a proper rejection under 35 U.S.C. §102(b). Consequently, Applicants request withdrawal of the rejection followed by allowance of Claims 1-27. Responsive remarks related to individual claims are provided below.

### **Claim 1**

Applicants' Claim 1 recites in part: "A method for establishing a network for communicating a message." Among the various reasons provided for rejecting Applicants' Claim 1, the Office Action states: "O'Neill discloses a method for establishing a network for communicating a message." Applicants respectfully disagree with such an assertion because O'Neill's patent is directed at a position determining system rather than a method for establishing a network.

Applicants' statement above is substantiated by O'Neill's Abstract (as well as Claim 1), which states in pertinent part: "A system for determining the positions of a plurality of vehicles traveling on or above a defined sector of the earth's surface..." Towards this end, O'Neill uses "means for calculating the instantaneous position of each one of said vehicles within said sector based upon the time of transmission of the interrogation signal from the ground station and the arrival times of the three retransmitted beacon signals which carry vehicle identifying information identifying said one vehicle" (Col. 63, lines 43-49).

Applicants' Claim 1 further recites in part: "assigning to the one of the topographic network devices a network address that includes the topographic coordinate set thereof." The Office Action asserts that O'Neill anticipates this step because O'Neill has a "unique address assigned to the aircraft or network device, col .19 lines 35-40." Applicants respectfully disagree with this assertion, because O'Neill does not use a network address as described in Applicants' Claim 1. To the contrary, O'Neill uses "a reply beacon signal coded with information uniquely identifying the particular aircraft with which the transponder is associated." (col 27, lines 63-65) and describes this signal using FIG. 5. The beacon signal of FIG. 5 contains 22 identification bits. Applicants respectfully assert that O'Neill's beacon signal does not contain "a topographic coordinate set."

Applicants' assertion is further borne out by O'Neill col . 28, lines 10-18, which states in pertinent part: "...a sequence of 22 bits which carry the identification code for the particular aircraft producing the beacon signal. The 22 bits shown are sufficient to uniquely identify over four million different aircraft, which is about one hundred times the total number of aircraft now in existence." ( $2^{22} = 4$  million).

Consequently, Applicants respectfully assert that O'Neill does not anticipate the part of Applicants' Claim 1, which states: "assigning to the one of the topographic network devices a network address that includes the topographic coordinate set thereof."

Applicants' Claim 1 further includes: "transmitting the topographic coordinate set of the one of the topographic network devices to the topographic network devices directly connected thereto." The Office Action asserts that O'Neill anticipates this step because O'Neill, per the Office Action, "transmit signals or the topologic coordinate set directly, col. 39 lines 40-52." Applicants respectfully disagree with this assertion, because O'Neill does not transmit a topographic coordinate set. To substantiate this statement, Applicants draw attention to O'Neill's col. 39 lines 40-52 (cited in the Office Action), which is reproduced below:

The transmitting and receiving circuitry of the ground-link satellite S2 consists of a number of subsystems which are illustrated in FIGs. 16A, 16B and 16C. It will be recalled that satellite S2 has a number of different functions: (1) to relay interrogation signals from the ground station to all aircraft within range of the system; (2) to retransmit beacon signals received directly from the responding aircraft to the ground station; (3) to relay to the ground station beacon signals received and retransmitted by the outer satellites S1 and S3; and, optionally, (4) to relay NPG signals produced by the ground station to the aircraft. Each of these functions will be described in turn with reference to FIGs. 16A-16C. (Emphasis added)

The emphasized sections above point to the different signals, specifically the interrogation signals and the beacon signals that are used by O'Neill. The interrogation signal is described in O'Neill col. 15, lines 41-51 as follows:

The interrogation signal may assume any desired form but will ordinarily be a single digital pulse or a characteristic series of digital pulses. It is important to note, however, that the interrogation signal is not specific to any one particular aircraft but it instead recognized by, and capable of eliciting a response from, more than one of the different aircraft using the system.

Applicants respectfully point out that the description above of the interrogation signal does not refer to a topographic coordinate set.

As far as the beacon signal attention is concerned, Applicants have pointed out in remarks above that the beacon signal contains a 22-bit identifying signal having no topographic coordinate information.

It is unfortunate that the Office Action does not point out where in the cited art can be found the inclusion of a topographic coordinate that is used by O'Neill in a manner that has any relevance to Applicants' method Claim 1.

O'Neill's references to topography (e.g. longitude, latitude) pertain to position information derived from signal propagation time measurements, and consequently do not bear reasonable comparison to the topographic elements as described in Applicant's Claim 1. Applicants' statement is substantiated by O'Neill col. 17, lines 11-30, which explain O'Neill's references to topography:

When a complete set of return signal arrival times has been accumulated, the ground station computer forms the differences  $(t_1-t_0)$ ,  $(t_2-t_0)$  and  $(t_3-t_0)$  and carries out a computational sequence which amounts essentially to solving a set of three equations for three unknowns, the three unknowns being the three position coordinates of the aircraft...

The position coordinates that result from these calculations are expressed in terms of (or are readily converted to) the latitude, longitude and height of the aircraft above a fixed reference surface (normally Mean Sea Level, or MSL).

In summary, Applicants respectfully assert that O'Neill does not anticipate the part of Applicants' Claim 1, which states: "assigning to the one of the topographic network devices a network address that includes the topographic coordinate set thereof." O'Neill does not further anticipate that part of Applicants' Claim 1, which states: "transmitting the topographic coordinate set of the one of the topographic network devices to the topographic network devices directly connected thereto."

Because O'Neill does not anticipate at least the two parts of Applicants' Claim 1 described above, Applicants' respectfully assert that the rejection of Claim 1 under 35 U.S.C. §102(b) is improper.

Consequently, Applicants request withdrawal of the rejection followed by allowance of Claim 1.

### **Claims 2-10**

Because Claim 1 is allowable, claims 2-10 that depend directly or indirectly on Claim 1 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Applicants respectfully request allowance of claims 2-10. Responsive remarks related to some of these dependent claims are provided below.

### **Claim 3**

The Office Action asserts that O'Neill discloses “a source network device, a destination network device and an intermediate network device [O'Neill, Ground station computer, col. 6 line 1].” While asserting that O'Neill's Ground station computer is equivalent to Applicant's “intermediate network device,” the Office Action fails to indicate which of O'Neill other devices constitute the source network device and the destination network device. Presumably, when O'Neill's Ground station computer is the intermediate network device, one of O'Neill's satellites is either a source network device or a destination network device. If this is the case, it is unfortunate that the Office Action fails to disclose where in O'Neill can be found a satellite (the alleged source/destination device) that “stores topographic coordinate sets,” because Applicants' Claim 3 includes” *“ones of the topographic network devices,* including the intermediate network device, *having stored therein the topographic coordinate sets* of at least one of the topographic network devices directly connected thereto as respective connected device coordinate sets...”

Applicants' respectfully assert that O'Neill does not anticipate Applicants' Claim 3 and consequently, the rejection of Claim 3 under 35 U.S.C. §102(b) is improper.

Applicants request withdrawal of the rejection followed by allowance of Claim 3.

### **Claims 4-10**

In the interests of brevity detailed responses to the rejection of dependent Claims 4-10 will be withheld. However, Applicants wish to point out that O'Neill does not disclose various elements of each of Applicants' claims 4-10. The Office Action fails to unambiguously identify corresponding anticipatory elements, if any, in O'Neill.

Some examples of Applicants' various elements referred to above include:

“co-locating the global positioning system receiver and the one of the topographic network devices” (Claim 4);

“providing a map” (Claim 5);

“inserting the topographic coordinate set into a packet configured for transmission” (Claim 6);

“extracting the topographic coordinate set from the packet” (Claim 7);

“transmitting... a device type indication,” (Claim 8);

“supplying to ones of the topographic network devices in each one of the regions additional topographic information ...” (Claim 9);

“routing the message … via the regional network device of the first one of the regions and the regional network device of the second one of the regions.” (Claim 10)

Applicants’ respectfully assert that the rejection of Claims 4-10 under 35 U.S.C. §102(b) is improper and request withdrawal of the rejection followed by allowance of Claims 4-10.

### **Claim 11**

The Office Action rejects Claim 11 by stating: “As per Claim 11 contains the similar limitations set for Claim 1. Therefore Claim 11 is rejected for the same rationale set forth in Claim 1.” Applicants respectfully traverse the Office Action assertion that Claim 11 contains “similar limitations set for Claim 1.” Claim 1 is a *method for establishing a network*, while Claim 11 is a *method for transmitting a message*. There are several elements of Claim 11 that are not included in Claim 1. For example, Claim 11 includes:

“inserting the topographic coordinate set of the destination network device into the message as a destination coordinate set;”

“identifying from the destination coordinate set and the connected device coordinate sets stored in the intermediate device…;” and

“transmitting the message from the intermediate network device to the identified one of the topographic network devices.”

Applicants respectfully assert that at least these elements of Applicants’ Claim 11 are not anticipated by O’Neill.

Furthermore, O’Neill does not disclose the use of topographical coordinates in the manner of Applicants’ Claim 11, especially in using these coordinates inside “a message.” It is unfortunate that the Office Action fails to disclose anticipatory elements, if any, in O’Neill in unambiguous detail.

Consequently, Applicants’ respectfully assert that the rejection of Claim 11 under 35 U.S.C. §102(b) is improper. Applicants request withdrawal of the rejection followed by allowance of Claim 11.

### **Claims 12-19**

Because Claim 11 is allowable, claims 12-19 that depend directly or indirectly on Claim 1 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Applicants respectfully request allowance of Claim 12-19.

### **Claim 20**

The Office Action rejects Claim 20 by stating: “As per claims 20-27 contain the similar limitations set for claims 1-19. Therefore claims 20-27 are rejected for the same rationale set forth in claims 1-19.” Applicants respectfully traverse the Office Action assertion that Claim 20 contains “similar limitations set for claims 1-19.”

There are several elements of Claim 20 that are not included in the claims of Claims 1-19. For example, Claim 20 includes:

“providing a network including end-user devices, topographic routers and communication links interconnecting them, at least the topographic routers each having a physical location represented by a topographic coordinate set, and a network address that includes the topographic coordinate set;” and

“transmitting a message from the source network device to an input router..”

Applicants respectfully submit that O’Neill does not at least disclose “providing topographic routers” in the manner described in Applicants’ Claim 20. It is unfortunate, that the Office Action fails to unambiguously identify O’Neill’s elements, if any, which anticipate the various elements of Applicants’ Claim 20.

Consequently, Applicants’ respectfully assert that the rejection of Claim 20 under 35 U.S.C. §102(b) is improper. Applicants request withdrawal of the rejection followed by allowance of Claim 20.

### **Claims 21-27**

Because Claim 20 is allowable, claims 21-27 that depend directly or indirectly on Claim 1 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Applicants respectfully request allowance of claim 21-27.

## **C. Claim Rejections under 35 U.S.C. §102(e)**

### **Statement of the Rejection**

Claims 1-27 have been rejected under 35 U.S.C. §102(e) as being anticipated by Shaffer et al [Shaffer 6,748,426 B1].

### **Response to the Rejection**

Applicants respectfully submit that the Office Action does not satisfy the requirements for a proper rejection under 35 U.S.C. §102(e). Responsive remarks related to individual claims are

provided below.

**Claim 1**

The Office Action points to various parts of Shaffer to substantiate the rejection of Claim 1 under 35 U.S.C. §102(e). For example, the Office Action points to “Shaffer, assigning the standardized address, col 5, lines 32-col 56 line 2” for rejecting that part of Applicants’ Claim 1 which reads: “assigning to the one of the topographic network devices a network address that includes the topographic coordinate set thereof.” It is unfortunate that the Office Action does not provide any specific details about the meaning of the Office Action phrase “assigning the standardized address” vis-à-vis Shaffer. Presumably, the Office Action is referring to Shaffer’s “Linkage Key” as described in Shaffer col. 5, line 32 and beyond.

Shaffer discloses a system and method for linking information in a global computer network. Per Shaffer’s Abstract:

Within the system, a first party identifier is captured and converted into a Linkage Key, such as a United States Postal Service Delivery point code (11-digit zip code). The Linkage Key is used to retrieve Linkage Key indexed data from various network nodes that house components of a virtual Linkage Key indexed database.

Shaffer further describes his LKIPV in col 5, lines 18-34 as:

**Linkage Key Input Parameter Values (LKIPV)**

LKIPV is a data item or items that is provided by the network, a network user or a user device connected to the network. The LKIPV is used to determine a Linkage Key that can be used to link information associated with the user and stored in other network nodes. Examples of LKIPV’s are: a 10-digit telephone number,... and the latitude and longitude of a current consumer location.”

(Emphasis added)

Furthermore, in col 5, lines 32-34 Shaffer discloses that “A Linkage Key is a data value used to associate in real-time information located in multiple databases or network nodes.

Applicant’s Claim 1 pertains to a network address as a part of a method for establishing a network, in contrast to Shaffer’s data value that is carried over a pre-existing network. Shaffer’s pre-existing networks, which include private networks as well as public networks, are described in Shaffer’s col 4, line 32- col. 5, line 17. The use of one of these pre-existing networks is further described in Shaffer’s System Description col. 10, lines 63-65 as follows: “

As illustrated, the consumer device 14 is connected to a public network 16. One example of such a network is the Internet, wherein the consumer device communicates via the Internet Protocol (IP) standard.

Persons of ordinary skill in the art will recognize that the IP standard uses a well-known addressing scheme where each network device has an IP network address. On the other hand, Applicants' Claim 1 pertains to establishing a network where a network device is assigned a network address that includes a topographic coordinate set.

Consequently, Applicants respectfully assert that Shaffer does not anticipate at least that part of Applicants' Claim 1, which states: "assigning to the one of the topographic network devices a network address that includes the topographic coordinate set thereof."

Furthermore, Applicants respectfully assert that Shaffer does not also anticipate another part of Applicants' Claim 1, which states: "transmitting the topographic coordinate set of the one of the topographic network devices to the topographic network devices directly connected thereto."

Because Shaffer does not anticipate at least these two parts of Applicants' Claim 1 described above, Applicants' respectfully assert that the rejection of Claim 1 under 35 U.S.C. §102(e) is improper. Applicants request withdrawal of the rejection followed by allowance of Claim 1.

### **Claims 2-10**

Because Claim 1 is allowable, claims 2-10 that depend directly or indirectly on Claim 1 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Applicants respectfully request allowance of claims 2-10. Responsive remarks related to some of these dependent claims are provided below.

### **Claim 3**

The Office Action asserts that Shaffer discloses "a source network device, a destination network device and an intermediate network device (i.e.: a merchant server)." While asserting that Shaffer's merchant server is equivalent to Applicant's "intermediate network device," the Office Action fails to indicate which of Shaffer's other devices constitute the source network device and the destination network device. Presumably, when Shaffer's merchant server is the intermediate network device, one of Shaffer's consumer devices 14, for e.g. wireless telephone 14A, is either a source network device or a destination network device. If this is the case, it is unfortunate that the Office Action fails to disclose where in Shaffer can be found a consumer device, more so one such as wireless telephone 14A, which "stores topographic coordinate sets," because Applicants' Claim 3 includes "ones of the topographic network devices, including the intermediate network device,

*having stored therein the topographic coordinate sets* of at least one of the topographic network devices directly connected thereto as respective connected device coordinate sets;”

Applicants’ respectfully assert that Shaffer does not anticipate Applicants’ Claim 3 and consequently, the rejection of Claim 3 under 35 U.S.C. §102(e) is improper.

Applicants request withdrawal of the rejection followed by allowance of Claim 3.

#### **Claims 4-10**

In the interests of brevity detailed responses to the rejection of dependent Claims 4-10 will be withheld. However, Applicants wish to point out that Shaffer does not disclose various elements of each of Applicants’ claims 4-10. The Office Action fails to unambiguously identify corresponding anticipatory elements, if any, in Shaffer.

Some examples of Applicants’ various elements referred to above include:

“transmitting... a device type indication,” (Claim 8);

“supplying to ones of the topographic network devices in each one of the regions additional topographic information...” (Claim 9);

“routing the message ... via the regional network device of the first one of the regions and the regional network device of the second one of the regions.” (Claim 10)

Applicants’ respectfully assert that the rejection of Claims 4-10 under 35 U.S.C. §102(e) is improper and request withdrawal of the rejection followed by allowance of Claims 4-10.

#### **Claim 11**

The Office Action rejects Claim 11 by stating: “As per Claim 11 contains the similar limitations set for Claim 1. Therefore Claim 11 is rejected for the same rationale set forth in Claim 1.” Applicants respectfully traverse the Office Action assertion that Claim 11 contains “similar limitations set for Claim 1.” Claim 1 is a *method for establishing a network*, while Claim 11 is a *method for transmitting a message*. There are several elements of Claim 11 that are different when compared to Claim 1. For example, Claim 1 includes “*assigning* to the one of the topographic network devices a network address...,” while Claim 11 includes: “the topographic network devices *each having* a physical location represented by a topographic coordinate set, and *a network address* that includes the topographic coordinate set.”

However, several arguments set forth above in response to the rejection of Claim 1 are appropriate in response to the rejection of Claim 11. In the interests of brevity these arguments are not repeated herein.

Applicants' respectfully assert that the rejection of Claim 11 under 35 U.S.C. §102(e) is improper. Applicants request withdrawal of the rejection followed by allowance of Claim 11.

**Claims 12-19**

Because Claim 11 is allowable, claims 12-19 that depend directly or indirectly on Claim 1 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Applicants respectfully request allowance of Claim 12-19.

**Claim 20**

The Office Action rejects Claim 20 by stating: "As per claims 20-27 contain the similar limitations set for claims 1-19. Therefore claims 20-27 are rejected for the same rationale set forth in claims 1-19." Applicants respectfully traverse the Office Action assertion that Claim 20 contains "similar limitations set for claims 1-19."

There are several elements of Claim 20 that are not included in other claims among Claims 1-19. For example, Claim 20 includes:

"providing a network including end-user devices, topographic routers and communication links interconnecting them, at least the topographic routers each having a physical location represented by a topographic coordinate set, and a network address that includes the topographic coordinate set;" and

"transmitting a message from the source network device to an input router.."

Applicants respectfully submit that Shaffer does not at least disclose "providing topographic routers" in the manner described in Applicants' Claim 20. It is unfortunate, that the Office Action fails to unambiguously identify Shaffer's elements, if any, which anticipate the various elements of Applicants' Claim 20.

Consequently, Applicants' respectfully assert that the rejection of Claim 20 under 35 U.S.C. §102(e) is improper. Applicants request withdrawal of the rejection followed by allowance of Claim 20.

**Claims 21-27**

Because Claim 20 is allowable, claims 21-27 that depend directly or indirectly on Claim 1 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Applicants respectfully request allowance of claim 21-27.

**D. Remarks related to new claims 28-31**

Claims 28-31 are newly submitted claims based in part on the description in Applicant's original specification (paragraphs 0034 – 0036), reproduced below for easy reference:

The message is composed of one or more data sets known in the art by such names as packets, frames, cells, and protocol data units. In this disclosure, the term *packet* will be used to describe such data sets. Each packet includes a header that includes additional data relating to the packet. The additional data includes a destination address that will be called a *destination coordinate set*. In the network 100, the destination coordinate set is composed of the topographic coordinate set of the destination network device.

In the following example, the source network device is the end-user device 112 and the destination network device is the end-user device 128. To send a message to a given destination network device, the source network device determines the topographic coordinate set of the destination device, and inserts the topographic coordinate set of the destination device as a destination coordinate set into the header of each packet in which the message is contained. To determine the destination coordinate set of the destination device, the source network device may include a look-up table that includes a cross-reference between the real-world names of potential destination end-users and the topographic coordinate sets of their end-user devices. The header of at least one packet of the message may additionally include the topographic coordinate set of the source network.

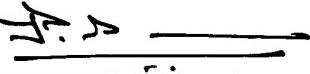
**Prior Art Made of Record**

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

## CONCLUSION

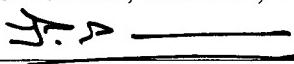
In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that claims 1-31 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned representative at (404) 610-5689.

Respectfully submitted,

  
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, P. O. Box 1450, Alexandria, VA, 22313-1450, on 10/5/2005.

  
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